

**TRANSPORTATION DEPARTMENT[761]**

**Adopted and Filed**

**Rule making related to motor vehicles operated by an automated driving system**

The Transportation Department hereby adopts new Chapter 380, “Motor Vehicles Operated by an Automated Driving System,” and amends Chapter 400, “Vehicle Registration and Certificate of Title,” Chapter 524, “For-Hire Intrastate Motor Carrier Authority,” and Chapter 540, “Transportation Network Companies,” Iowa Administrative Code.

*Legal Authority for Rule Making*

This rule making is adopted under the authority provided in Iowa Code sections 307.12 and 321.519.

*State or Federal Law Implemented*

This rule making implements, in whole or in part, Iowa Code sections 321.514 through 321.519.

*Purpose and Summary*

This rule making establishes Chapter 380 and makes conforming changes to existing Chapters 400, 524 and 540. 2019 Iowa Acts, Senate File 302, enacted Iowa Code sections 321.514 through 321.519, which authorize operation of autonomous (driverless-capable) vehicles on Iowa roadways and provide the Department with rule-making authority to regulate such vehicles.

New Chapter 380 applies to the regulation of driverless-capable vehicles in Iowa. A driverless-capable vehicle means a vehicle that is capable of performing the entire driving task within the automated driving system’s operational design domain without intervention of a conventional human driver. The following paragraphs further explain the amendments:

**Definitions.** While many of the definitions applicable to driverless-capable vehicles can be found in Iowa Code section 321.514, a few definitions require further clarification in the rules. For example, the term “driverless-capable vehicle” is further defined to mean a vehicle meeting the definition of a Level 3, 4 or 5 classification, which are classifications of higher-level automated vehicles widely recognized within the autonomous vehicle community. Chapter 380 also defines “operational design domain” as that document established by the vehicle manufacturer that is very important in assessing the capabilities and intended uses of a driverless-capable vehicle.

**Identification and operational restrictions.** The rules incorporate a fundamental requirement in regulating driverless-capable vehicles in Iowa, namely, the requirement to identify the vehicle as driverless-capable in the Department’s vehicle registration system. The rules also address operational restrictions for driverless-capable vehicles. The Department already has the authority to place operational restrictions on a vehicle registered in Iowa, for example, if the vehicle is unable to meet certain equipment standards. The new chapter and amendments extend this authority to driverless-capable vehicles, especially for when the Department begins to see fully autonomous vehicles with no human driver required to be present in the vehicle. There may be operational restrictions needed for a vehicle due to the intended design of the vehicle. Two examples of potential operational restrictions would be to limit the vehicle to being operated only during daylight hours or to being operated only on roadways with a certain classification, such as a highway or a city street. Part of establishing any operational restrictions will include a review of the vehicle’s operational design domain or other necessary documentation to assess the vehicle’s operational capabilities. If the Department does issue a restricted registration, the Department will issue a certificate of restriction to be provided to the vehicle owner, which shall be carried in the vehicle and available for inspection by law enforcement upon request. These amendments also provide that if an applicant receives a software

update or otherwise modifies the vehicle to make it driverless-capable after registration, the applicant is required to notify the Department within 30 days.

**Driverless-capable vehicle networks.** These amendments address driverless-capable vehicle networks that may be operated by transportation network companies (e.g., Uber or Lyft) or other commercial carriers. These networks and carriers are already required to apply to the Department for operating authority, and the rules now require a network or carrier intending to operate driverless-capable vehicles in Iowa to notify the Department. The Department may also require additional documentation as part of the application process.

**Vehicle registration and titling.** This rule making amends the existing chapter governing vehicle registration and titling to address that the applicant must indicate whether the vehicle the applicant is seeking to register is driverless-capable. In addition to requiring this information on the vehicle registration application, the Department will also have the internal ability to capture this information from the Department's vehicle identification system. Supporting documentation requirements for a vehicle registration application are also being changed to include the authority to require the operational design domain for the driverless-capable vehicle or any other documentation necessary to assess the driverless-capable vehicle's operational capabilities. Finally, these amendments allow a driverless-capable vehicle indicator to be placed on the vehicle title or registration, which may also include whether any operational restrictions exist. This indicator may only appear in the electronic vehicle records system.

#### *Public Comment and Changes to Rule Making*

Notice of Intended Action for this rule making was published in the Iowa Administrative Bulletin on May 19, 2021, as **ARC 5621C**. A public hearing was held on June 11, 2021.

The Department received oral and written comments from the Alliance for Automotive Innovation (AFAI) regarding rules 761—380.1(321) through 761—380.7(17A,321) and subrules 400.4(10) and 400.21(6). AFAI shared concerns about the Department's proposed rules and amendments, in particular as related to the Department's proposal to establish a driverless-capable vehicle testing permit in rule 761—380.7(17A,321). AFAI expressed that the Iowa Code already provides a comprehensive framework for driverless-capable vehicles to operate safely and that creation of an additional testing permit process was unnecessary and would potentially discourage driverless-capable vehicle companies from bringing business to Iowa. AFAI also submitted several suggestions to further align the Department's rules with the Iowa Code and industry experience, including deleting terminology that is not used in the rule chapter, making definitions and references consistent with existing technology, and removing requirements to submit extra documentation to the Department other than the operational design domain of the vehicle.

The Department received written comments from the National Association of Mutual Insurance Companies (NAMIC) suggesting that subrule 380.7(2) be revised to add that a manufacturer or entity applying for a testing permit submit evidence of the vehicle's driving operations in order to conform to Iowa state traffic laws and regulations. The Department has not adopted the testing permit provision that was proposed in rule 761—380.7(17A,321); therefore, the suggested change is no longer applicable.

A description of the changes made by the Department in response to AFAI's comments on each of these rules and subrules is as follows:

**Rule 761—380.1(321)** establishes the applicability of Chapter 380. The Department has removed the proposed language regarding system-equipped driverless-capable vehicles since this term is not used in this chapter.

**Rule 761—380.2(321)** adopts new definitions for Chapter 380. The Department has removed the proposed definition of "ADS-equipped vehicle" because that term is not used in this chapter. The Department has revised the definition of a Level 3 driverless-capable vehicle to conform with existing technology, which provides that a Level 3 vehicle requires a human operator to respond to a request to intervene issued by the vehicle's automated driving system, although the human operator need not be

present in the vehicle. The definition of “operational design domain” has also been revised to align with the definition in the Iowa Code.

**Rule 761—380.3(17A)** provides contact information for the Department. This rule has been revised to remove a proposed reference to driverless-capable vehicle testing permits, which has been replaced with a reference to driverless-capable vehicle exemptions. Driverless-capable vehicle exemptions are discussed in further detail in the paragraph explaining the changes to rule 761—380.7(17A,321) below.

**Rule 761—380.4(321)** addresses identification of driverless-capable vehicles at the time of registration. The Department has added terminology describing the vehicle classification level that is commonly used, as well as language to acknowledge changes in a vehicle’s recorded SAE level of automation if the automated driving system is subsequently upgraded.

**Rule 761—380.5(321)** authorizes the Department to impose operational restrictions on a driverless-capable vehicle as a condition of registration pursuant to rule 761—400.21(321). The Department has added language requiring a driverless-capable vehicle manufacturer to provide information to the Department regarding the vehicle’s operational design domain and associated operational restrictions. This revision also allows the manufacturer to provide subsequent information to the Department about automated driving system design upgrades to the vehicle so that the Department may update its records.

**Rule 761—380.6(321)** addresses documentation submission requirements for a person seeking to operate a for-hire driverless-capable vehicle network in Iowa. The Department has not adopted the proposed application requirement for the submission of additional documentation regarding features other than the vehicle’s operational design domain.

**Rule 761—380.7(17A,321)** creates a driverless-capable vehicle testing process in Iowa. However, upon further review of the Iowa Code, which already provides a framework for a driverless-capable vehicle to operate in Iowa, the Department has not adopted the proposed testing permit provision because the Department agrees that the driverless-capable vehicle exemption pursuant to Iowa Code section 321.515(1)“b” is sufficient to address any circumstance in which a driverless-capable vehicle is unable to meet all of the traffic and motor vehicle safety laws and regulations in Iowa. This new rule establishes an application, review, and issuance process for the exemption as well as a suspension and hearing process.

**Subrule 400.4(10)** addresses supporting documentation as part of an application for vehicle registration and title. The Department has removed the proposed application requirement for the submission of additional documentation other than the vehicle’s operational design domain. The Department has also removed a cross-reference to a proposed subrule concerning the testing permit process that was not adopted.

**Subrule 400.21(6)** authorizes operational restrictions. The Department has revised this subrule to clarify that the Department will use the operational design domain to evaluate a driverless-capable vehicle’s intended operational design.

Nonsubstantive grammar and punctuation changes have also been made from the Notice.

#### *Adoption of Rule Making*

This rule making was adopted by the Department on August 12, 2021.

#### *Fiscal Impact*

This rule making has no fiscal impact to the State of Iowa.

#### *Jobs Impact*

After analysis and review of this rule making, no impact on jobs has been found.

#### *Waivers*

Any person who believes that the application of the discretionary provisions of this rule making would result in hardship or injustice to that person may petition the Department for a waiver of the discretionary provisions, if any, pursuant to 761—Chapter 11.

*Review by Administrative Rules Review Committee*

The Administrative Rules Review Committee, a bipartisan legislative committee which oversees rule making by executive branch agencies, may, on its own motion or on written request by any individual or group, review this rule making at its [regular monthly meeting](#) or at a special meeting. The Committee's meetings are open to the public, and interested persons may be heard as provided in Iowa Code section 17A.8(6).

*Effective Date*

This rule making will become effective on October 13, 2021.

The following rule-making actions are adopted:

ITEM 1. Adopt the following **new** 761—Chapter 380:

CHAPTER 380

MOTOR VEHICLES OPERATED BY AN AUTOMATED DRIVING SYSTEM

**761—380.1(321) Applicability.** This chapter applies to driverless-capable motor vehicles operated by an automated driving system, which shall be regulated exclusively by the department under Iowa Code section 321.519.

This rule is intended to implement Iowa Code sections 321.514 through 321.519.

**761—380.2(321) Definitions.** The definitions in Iowa Code section 321.514 are adopted and incorporated herein. In addition:

“*Conventional human driver*” means the same as defined in Iowa Code section 321.514 but does not include a driverless-capable vehicle user.

“*Driverless-capable vehicle*” as defined in Iowa Code section 321.514 means the vehicle meets one of the following classifications:

1. Level 3—conditional driving automation. The vehicle is capable of achieving the sustained and specific performance of the entire dynamic driving task as provided in the operational design domain. An SAE Level 3 vehicle requires a human operator to respond to a request to intervene issued by the automated driving system, as well as to dynamic driving task performance-relevant system failures in other vehicle systems. However, a driverless-capable Level 3 vehicle can be remotely operated without a human operator present in the vehicle.

2. Level 4—high driving automation. The vehicle is capable of achieving the sustained and specific performance of the entire dynamic driving task as provided in the operational design domain. An SAE Level 4 vehicle does not require a conventional human driver and does not require a driverless-capable vehicle user to be present in the vehicle or to perform remote operation to respond to a request to intervene issued by the automated driving system. A Level 4 vehicle is capable of fallback to a minimal risk condition without human intervention.

3. Level 5—full driving automation. The vehicle is capable of achieving the sustained and unconditional performance of the entire dynamic driving task. An SAE Level 5 vehicle is capable of performing all driving functions under all conditions. A Level 5 vehicle does not require a conventional human driver and does not require a driverless-capable vehicle user to be present in the vehicle or to perform remote operation to respond to a request to intervene issued by the automated driving system. A Level 5 vehicle is capable of fallback to a minimal risk condition without human intervention.

“*Driverless-capable vehicle user*” means a person who does not control the in-vehicle accelerating, braking, steering, and transmission gear selection input devices in order to operate a motor vehicle and who is not otherwise expected to respond to a request to intervene issued by the automated driving system of a driverless-capable vehicle.

“*Functional highway classifications*” means the process by which streets and highways are grouped into classes, or systems, according to the character of service the street or highway is intended to provide,

and may include but not be limited to a functional highway classification established under 23 CFR Section 470.105.

“*Operational design domain*” means the same as defined in Iowa Code section 321.514.

“*Public highways*” means the same as “street” or “highway” as defined in Iowa Code section 321.1.

“*SAE*” means the Society of Automotive Engineers, which is an international association reputed for its standards development efforts, including its efforts to standardize definitions of driving automation systems.

This rule is intended to implement Iowa Code sections 321.1 and 321.514 and 23 CFR Section 470.105.

**761—380.3(17A) Information and addresses.** Information and forms pertaining to driverless-capable vehicle exemptions and vehicle registration and operational restrictions issued by the department or a county treasurer for a driverless-capable vehicle may be obtained in the form and manner prescribed by the department by mail from the Motor Vehicle Division, Iowa Department of Transportation, P.O. Box 9278, Des Moines, Iowa 50306-9278; in person at 6310 SE Convenience Blvd., Ankeny, Iowa; by telephone at (515)237-3264; by email at [uscusto@iowadot.us](mailto:uscusto@iowadot.us); or on the department’s website at [www.iowadot.gov](http://www.iowadot.gov).

This rule is intended to implement Iowa Code section 17A.3.

**761—380.4(321) Identification of driverless-capable vehicles in registration.** The SAE level of automation of a driverless-capable vehicle subject to registration under 761—Chapter 400 shall be listed in the department’s records system established under Iowa Code section 321.31 subject to possible changes to the SAE level of automation if the vehicle’s automated driving system is subsequently upgraded.

This rule is intended to implement Iowa Code sections 321.20, 321.31, 321.515 and 321.519.

**761—380.5(321) Operational restrictions.** The department may impose operational restrictions on a driverless-capable vehicle as provided in rule 761—400.21(321) as a condition of registration of the vehicle. The manufacturer shall provide information to the department regarding the vehicle’s operational design domain and associated operational restrictions. The manufacturer may subsequently provide information showing changes to the vehicle’s operational design domain and associated operational restrictions if there are subsequent automated driving system design upgrades, and the department shall update its records accordingly.

This rule is intended to implement Iowa Code sections 321.515 and 321.519.

**761—380.6(321) Identification of driverless-capable vehicle networks.** A person seeking to operate a for-hire driverless-capable vehicle network in Iowa, including an on-demand driverless-capable vehicle network, may be required to submit to the department the operational design domain as part of the application for the applicable permit under rule 761—524.3(325A) or 761—540.4(321N).

This rule is intended to implement Iowa Code sections 321.518 and 321.519.

**761—380.7(17A,321) Driverless-capable vehicle exemption.**

**380.7(1) Application.** If a driverless-capable vehicle does not meet the standards set forth in Iowa Code section 321.515(1) “b,” a driverless-capable vehicle manufacturer or entity may apply in the form and manner prescribed by the department for an exemption to allow driverless operation of the vehicle. A manufacturer or entity seeking an exemption under this rule shall do all of the following:

*a.* Disclose in the application which traffic or motor vehicle safety law the driverless-capable vehicle is seeking an exemption from under Iowa Code section 321.515(1) “b.”

*b.* Submit information describing how the manufacturer or entity intends to operate under the exemption without posing a safety risk to the public.

**380.7(2) Issuance and display of exemption.** If all requirements of subrule 380.7(1) are met, and the department has sufficient information to determine a public safety risk does not exist, the department may issue the driverless-capable vehicle exemption. The exemption may include operational restrictions

as provided under rule 761—400.21(321). The manufacturer or entity shall maintain a physical or electronic copy of the exemption and make it available for display at all times in the driverless-capable motor vehicle that is subject to the exemption. The copy may be in either a physical or an electronic format as prescribed by the department. The exemption shall be available for display or accessible to any peace officer upon request.

**380.7(3) Suspension or revocation and reinstatement.** The department may suspend or revoke a driverless-capable vehicle exemption if the exemption has been issued in conflict with the statutes or rules governing the exemption's issuance; if the exemption was issued based on false information; if there was a violation of Iowa Code sections 321.514 through 321.519, 761—Chapter 400 or this chapter; if the vehicle operating under the exemption is involved in a contributive motor vehicle accident attributable to the automated driving system performance in this or any other state and that accident results in death or serious injury; or if the vehicle is operated in violation of any of the motor vehicle laws of this or any other state that results in death or serious injury. For incidents occurring outside the state of Iowa, revocation may only occur once the investigation of the incident is completed and the vehicle's automated driving system performance was found to be involved in or contributive to a motor vehicle accident that resulted in a death or serious injury. The effective date of the suspension or revocation shall be 20 days after the department has mailed notice of the revocation to the manufacturer or entity by first class.

**380.7(4) Hearings.** A manufacturer or entity whose driverless-capable vehicle exemption has been suspended or revoked may contest the suspension or revocation in accordance with Iowa Code chapter 17A and 761—Chapter 13. The request for a hearing shall be submitted in writing to the director of the motor vehicle division. The request shall include, as applicable, the manufacturer's or entity's name, exemption number, complete address and telephone number. The request must be submitted within 20 days after the date of the notice of the suspension or revocation. The department shall stay the suspension or revocation of an exemption for the period that the manufacturer or entity is contesting the suspension or revocation under this rule.

This rule is intended to implement Iowa Code sections 321.381, 321.482, 321.515 and 321.519.

ITEM 2. Adopt the following **new** definition of "Driverless-capable vehicle" in rule **761—400.1(321)**:

*"Driverless-capable vehicle"* means the same as defined in rule 761—380.2(321).

ITEM 3. Amend rule **761—400.1(321)**, definition of "ERT service provider," as follows:

*"ERT service provider"* means a person or entity authorized by the department under subrule ~~400.3(16)~~ 400.3(17) to submit electronic applications for certificate of title or registration of a vehicle on behalf of an end user to a county treasurer.

ITEM 4. Renumber subrule **400.3(16)** as **400.3(17)**.

ITEM 5. Adopt the following **new** subrule 400.3(16):

**400.3(16) Driverless-capable vehicle.** As provided in Iowa Code sections 321.20 and 321.515 and rule 761—400.21(321), the applicant shall indicate on the application whether the vehicle is a driverless-capable vehicle as defined in rule 761—380.2(321).

ITEM 6. Amend rule **761—400.3(321)**, implementation sentence, as follows:

This rule is intended to implement Iowa Code sections 321.1, 321.8, 321.20, 321.23 to 321.26, 321.31, 321.34, 321.46, 321.105A, 321.109, 321.122, 321.515, 321.519, 322.19A and 423.26.

ITEM 7. Renumber subrule **400.4(10)** as **400.4(11)**.

ITEM 8. Adopt the following **new** subrule 400.4(10):

**400.4(10) Driverless-capable vehicles.** If an application is made for a driverless-capable vehicle, the department may require the application to be accompanied by the operational design domain.

ITEM 9. Amend renumbered subrule 400.4(11) as follows:

**400.4(11) Supporting document retained by county treasurer.** All supporting documents, except those submitted pursuant to subrule ~~400.3(16)~~ 400.3(17), shall be retained by the county treasurer.

ITEM 10. Amend rule **761—400.4(321)**, implementation sentence, as follows:

This rule is intended to implement Iowa Code sections 321.20, 321.23, 321.24, 321.30, 321.31, 321.45 to 321.50, 321.67, 321.515, 321.519 and 322.3.

ITEM 11. Adopt the following **new** subrule 400.7(12):

**400.7(12)** Driverless-capable vehicle indicator, which may also indicate whether operational restrictions exist.

ITEM 12. Amend rule **761—400.7(321)**, implementation sentence, as follows:

This rule is intended to implement Iowa Code sections 321.24, 321.31, 321.40, 321.45, 321.52, 321.69, 321.71, 321.124, 321.515, 321.519 and 322G.12.

ITEM 13. Amend rule 761—400.21(321) as follows:

**761—400.21(321) Registration of vehicles on a restricted basis.** The department may register a vehicle which does not meet the equipment requirements of Iowa Code chapter 321, due to the particular use for which it is designed or intended, or which is a driverless-capable vehicle as defined in rule 761—380.2(321). Registration may be accomplished upon payment of the appropriate fees and after inspection and certification by the department that the vehicle is not in an unsafe condition.

**400.21(1) to 400.21(4)** No change.

**400.21(5)** When a vehicle registered in this state is modified to make it a driverless-capable vehicle as defined in rule 761—380.2(321), the person in whose name the vehicle is registered shall within 30 days notify the department upon a form prescribed by the department.

**400.21(6)** As provided in Iowa Code sections 321.515 and 321.519, the department may restrict the operations of a driverless-capable vehicle registered in this state or another state but which operates in this state. The restrictions may include but are not limited to the restrictions provided in subrules 400.21(1) and 400.21(2) and any operational restrictions based on a specific functional highway classification, weather conditions, days of the week, times of day, and other elements of operational design while the automated driving system is engaged. The department may require the vehicle owner to submit to the department the automated driving system’s intended operational design domain for the vehicle on a form prescribed by the department. The department may evaluate the automated driving system’s intended operational design domain for the vehicle. The department may establish additional operational restrictions to ensure safe operation of the vehicle. The department shall issue a certificate of restriction as provided in subrule 400.21(3) for any restriction established under this subrule, and the certificate shall be carried in the vehicle and made available for inspection by any peace officer upon request.

This rule is intended to implement Iowa Code sections 321.1, 321.23(4), 321.30(2), 321.101(1), and 321.234A and ~~subsections 321.23(4), 321.30(2), and 321.101(1)~~, 321.515 and 321.519.

ITEM 14. Adopt the following **new** paragraph **524.3(3)“f”**:

*f.* All applicable documents identified in 761—subrule 380.7(2) and any other documentation, if required by the department, necessary to assess the operational capabilities of any driverless-capable vehicles the motor carrier intends to operate, including for the purpose of determining whether to impose operational restrictions as authorized under rule 761—400.21(321).

ITEM 15. Amend **761—Chapter 524**, implementation sentence, as follows:

These rules are intended to implement Iowa Code sections 321.515 and 321.519 and chapter 325A.

ITEM 16. Reletter paragraph **540.4(3)“j”** as **540.4(3)“k.”**

ITEM 17. Adopt the following **new** paragraph **540.4(3)“j”**:

*j.* All applicable documents identified in 761—subrule 380.7(2) and any other documentation, if required by the department, necessary to assess the operational capabilities of any driverless-capable vehicles the transportation network company intends to operate, including for the purpose of determining whether to impose operational restrictions as authorized under rule 761—400.21(321).

ITEM 18. Amend **761—Chapter 540**, implementation sentence, as follows:  
These rules are intended to implement Iowa Code sections 321.515 and 321.519 and chapter 321N.

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EDITOR'S NOTE: For replacement pages for IAC, see IAC Supplement 9/8/21.